HOTCHKISS & FRANKEN

ATTENTION VALUE OF ADVERTISEMENTS

UNIV. OF
TORONTO
LIBRARY

1924

Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

http://www.archive.org/details/attentionvalueof00hotcuoft

H8323

The Attention Value of Advertisements in a Leading Periodical

An Experiment in measuring the relative attention secured by the various
advertisements printed in the "Saturday Evening Post"
of November 8, 1919.

CONDUCTED BY
GEORGE B*urton*. HOTCHKISS
Professor of Advertising and Marketing in New York University
AND
RICHARD B. FRANKEN
Lecturer in Advertising and Marketing in New York University

182585.
17.7.23

Report Prepared
Under the Auspices of the

New York University Bureau of Business Research
LEWIS H. HANEY, Director

NOVEMBER, 1920

COPYRIGHT 1920 BY
NEW YORK UNIVERSITY
BUREAU OF BUSINESS RESEARCH

PREFACE.

The following study in attention value of advertising is submitted for several reasons. Its practical value is obvious, for, of the large expenditures business men make each year in advertising, this experiment shows that millions of dollars are spent uneconomically. For example, the experiment described here, leads to such definite conclusions as the following: Neither the increase in size of space used, nor the use of color, increases the attention value of the advertisement in proportion to the additional cost. Pages one and two are the most economical advertising spaces, in so far as attention value is concerned; the average attention value of the first ten pages is superior to any other group of similar number. Photographs and drawings appear to have about equal attention value.

Moreover, the theoretical value of such a study is not small. It is a step toward the formulation of laws of causation in the mixed field of applied psychology and economics. It is one of a group of pioneer studies in advertising values, which, by raising problems and pointing the way to their solution, may help to put marketing on a more scientific basis.

The Bureau of Business Research does not regard the results of the experiment here recorded as final. The group of persons experimented with was too limited and the number of advertisements too small for that. It does believe, however, that the results are of such value that they should be published, both as a practical aid to advertisers and as a stimulus to further research in the same field.

Lewis H. Haney,
Director.

ACKNOWLEDGMENT.

The Bureau of Business Research desires to express its appreciation of the friendly criticism and help that were accorded by Professor Harry L. Hollingworth, in the planning of this investigation, in the statistical treatment of the data obtained, and in drawing the conclusions. Professor Hollingworth, however, is in no way responsible for any statement made in the report.

TABLE OF CONTENTS.

Importance of Attracting Attention 7
Purpose of the Experiment 7
Method of Obtaining Data 7
Validity of Recognition Method 10
Fairness of Test 10
Attention Value of each Advertisement 12
Attention Value of Color 18
Attention Value of Preferred Positions 19
    (a) Back Cover 19
    (b) Pages One and Two 21
Attention Value of Position on Page 23
    (a) Right and Left Hand Pages 23
    (b) Half Page Advertisements 24
    (c) Quarter Page Advertisements 25
Distribution of Advertisements 25
    (a) Black and White Pages 25
    (b) Colored Pages 26
    (c) The Center Spread 28
Attention Value of Size 29
Drawings vs. Photographs 30
Attention Value of Reader Interest 31

THE ATTENTION VALUE OF ADVERTISEMENTS IN A LEADING PERIODICAL.

The Importance of Attracting Attention

The first function that any advertisement must perform is to attract the attention of the reader. If the advertisement is not noticed, all the fine art and good copy are wasted. Of course, an advertisement, in addition to securing the attention, must be able to hold the attention long enough to impress its message on the mind of the reader; but the attention-getting power of an advertisement remains a vital and indispensable measure of its value.

One investigator tabulated all the full page advertisements appearing in two standard magazines during 1890 and classified these into three groups (good, fair, poor) according to their attention value. He then searched the advertising sections of the same magazines for 1910, and found that there were three times as many firms still advertising (after twenty years) whose advertisements had good attention value as those whose advertisements showed poor attention value.

Purpose

To measure the attention value of the advertisements in the November 8th, 1919, issue of the Saturday Evening Post, an experiment was conducted with a group of New York University students. As a result, some important points were established. The purpose of this special bulletin is to set forth these points in such a way that they may be of practical value to all advertisers.

Method of Obtaining Data

On Tuesday, November 11, 1919, at noon, Professor George Burton Hotchkiss of New York University, gave his class, consisting of approximately 175 students in Marketing (all men), a reading assignment in the November 8th, 1919, issue of the Saturday Evening Post. The students were simply told to read an article on merchandising as part of their outside reading in connection with the course. Aside from being told to read the assigned article, the subjects were influenced in no way in their handling of the magazine.

The test was conducted on Tuesday, November 18th, at noon, or one week after the assignment had been given. Out of 175 persons, 104 (counted as 100) stated that they had read the assignment. Only these persons therefore were tested. All of the persons tested must have seen the Saturday Evening Post sometime between November 11th and November 18th. The longest possible time that any person could have had this issue of the "Post" in his possession was from Thursday, November 6th to Tuesday, November 18th (The Saturday Evening Post usually comes out on Thursday). The shortest possible time any person could have had the "Post" in his possession was from Tuesday morning (the date of the test) up to noon, the time the test was given.

The Method of Testing and Scoring

Each person who said that he had read the assignment was given a pile containing all the advertisements in the November 8th issue of the "Post" (excepting advertisements of less than one quarter page in size, of which there were thirteen) and an equal number of other advertisements which had appeared in the "Post" upwards of a year ago. The front and back covers were also included, together with old covers.

All the advertisements were pasted on thin cardboard and were keyed with a number near the upper right hand corner. Each subject was instructed to write the number of all the advertisements that he was *fairly certain* he had seen in the November 8th issue of the "Post," and to put a circle around this number if he was *absolutely certain* he had seen the advertisement in the November 8th issue.

For convenience in handling the experiment, the subjects were divided into two groups of 52 each, and half of the advertisements were given to each group.

In scoring the results, each advertisement was credited with one point for each person who had simply written the number, and with two points for each person who had encircled the number. The total of the points, or credits, that the advertisement received, was taken as its final score.

An advertisement which was recalled as "absolutely certain" by 12 persons and "fairly certain" by 13 persons would make a total score of 37 ($2 \times 12 = 24 + 13 = 37$).

The question of weighing the data fairly, as by scoring one point for each "fairly certain" judgment and two points for each "absolutely certain" judgment, should receive some consideration here. Whether the value of an "absolutely certain" judgment is two, three, or four times as much as a fairly certain judgment, is, of course, rather a complex problem. To one, however, who is familiar with psychological experiments, the giving of a weight of two to a judgment of "absolutely certain" is considered conservative. This conclusion may be justified as follows: After the data had been collected the judgments were separated into two groups, "fairly certain" and "absolutely certain." Totaling these groups, it was found that with the original group of advertisements (Nov. 8, 1919) there were twice as many absolutely certain judgments as fairly certain judgments, while with the control group of advertisements (from old issues) there were only just as many absolutely certain judgments as fairly certain judgments. Furthermore, there were also about twice as many absolutely certain judgments in the original group as in the control group, and an equal number of fairly certain judgments in both the original and control groups. Taking into consideration all the factors involved, it was found that the step taken between the total number of absolutely certain judgments and fairly certain judgments was twice as great as a purely chance judgment; that is to say, if we call pure chance 50%, the per cent. of fairly certain judgments was 57.5% and the per cent. of absolutely certain judgments was 65%. The step from 50% to 65% is just twice as great as the step from 50% to 57.5%. These results seem to justify the weighting of an "absolutely certain" judgment at twice the importance of a "fairly certain" judgment.

The extreme importance of proper statistical treatment of the data was realized, for almost the entire validity of the results of the report rest on this point. With this fact in mind, and with a view to finding out whether a different statistical treatment of the data would affect the results of the experiment, at least a half dozen different ways of calculating and tabulating the data were tried. No matter what method of calculating the data was used the same relative results were secured. In view of this fact, these results may be considered scientifically accurate. (1) Numerous ways of weighting and calculating the data do not alter the results, and (2) the figures stated in the report give a reliable index of the results of the experiment.

From the above statements it is apparent that had a higher value than 2 been given to the absolutely certain judgments the *relative* differences would have been greater than they are, and if no weight at all had been used, counting all judgments as having equal value, the *relative* differences would have been smaller. In either case, however, the ranking of the advertisements would have remained practically the same.

As the 104 persons were divided into two groups of 52 each, the best possible score that any single advertisement could receive was 100; that is, if 50 persons were absolutely certain they had seen the advertisement before, it would have received a score of 100.

Comparisons between the relative attention value of the individual advertisements, or average results, can be made so long as the advertisements or averages thus compared are based on the results of this experiment; but in no instance can the attention value received by any individual advertisement or any average result be directly compared with those obtained by other investigators. For example, we may say that in this experiment the colored centre spread advertisement secured 56% (93—37) less attention value than the back cover, and 21.6% (37—15.4) more attention than the average ¼-page advertisement, but we cannot make a direct comparison between the attention value received by this advertisement and the attention value secured by an advertisement in some other issue of the Post (for example the one used by E. J. Strong, Jr., in his 1913 experiment for the Association of National Advertisers.) Similarly, we can say that the average colored page secured 13% more attention value than the average black and white page in this experiment, but we cannot say that the average colored page secured a fraction of a per cent. more or less attention value than the attention value secured by the black and white pages in the 1913 Post.*

The Validity of the Recognition Method.

As to the validity of the recognition method used for determining the permanent impression (attention value) of a series of advertisements, all the previous experiments on the subject prove that this method tests what the reader paid attention to when he looked at the advertisements. The result of the recognition test, then, determines which advertisements were noticed originally and which were not. The per cent. of recognition memory which an advertisement receives is known as its attention value.

The Fairness of the Test.

The validity of the results of this experiment may be questioned on the ground that the group of subjects with which the test was conducted represents only one class of consumers. This question would be fully justified, were it not for the fact that the measurements concern only the attention value (or recognition memory, as it is called in psychology) of the advertisements. In such an experiment as was conducted, the subject is merely asked to identify or recognize, from among the number of advertisements those advertisements which he is sure or partly sure he has seen before, and separate the advertisements into piles according to the degree of certainty with which he recognizes the advertisements.

---

*The reasons why this cannot be done are: first, these two sets of advertisements have never competed against each other in the same experiment, and it is, therefore, impossible to say which set would secure the greater attention value; and, second, the technique used by the previous investigator in conducting his experiment, or his method of calculating the results, may have been different.

The subject is not asked whether the advertisements appeal to him or not; whether he is a user or possible user of the commodity advertised or not; whether he likes the style of advertising or not, etc. He is simply asked whether he has seen the advertisement before or not. Previous experiments seem to indicate that this recognition value is much the same for various groups of people, and no evidence has as yet been advanced to show that a test with one group is not valid with another.

It is true that attention follows interest and that the subject is most likely to remember the things in which he is most interested. The average person, however, is interested in a great number of things, many of which are far beyond his fondest hopes of possession.

To take account of such influences as may result from the reader's prior interest in the subject, the full-page advertisements have also been separated into groups, as "men's," "family," "technical," "automobile," etc., and the averages have been shown for each group. These averages show that the attention value of the various groups was quite similar. The greatest variation from the general average of 33 is the "men's" group (45). An examination of Table I shows that the several items included in this group were evenly distributed throughout the November 8th issue, and consequently any special interest value they possessed must have affected the different position groups about equally.

It should be kept in mind that the experiment did not deal with any one particular advertisement, or any one class of advertisements in the magazine test, but with such groups of data as the average of 60 black and white pages, and the average of 17 colored pages bring forth; and as each of these groups contained a number of so-called "technical" as well as "general" (food and clothing) advertisements, the different interests counter-balanced each other as far as attention value is concerned.

Furthermore, whenever single instances have been cited, such as the relative value of the back cover, the conclusions have been verified by the findings of other investigators who have conducted experiments with the same or other magazines.

Table I shows the attention value of the 124 advertisements that appeared in the November 8, 1919, issue of the Saturday Evening Post.

This table gives:

(1) The page on which the advertisement appeared.

(2) The name of the concern or product advertised.

(3) The weighted percentage of readers who noticed the advertisement.

(4) The cost of the space in 1919.

(5) The cost of reaching 1,000 readers, based on a circulation of 2,000,000 and the experimental data.

In case of the two-page center spread which made a score of 37, the cost per 1,000 readers is figured as follows:

$$\frac{\$14{,}000}{\dfrac{2{,}000{,}000}{1{,}000} \times \dfrac{37}{100}} = \$18.92$$

If every person of the 2,000,000 circulation noticed the advertisement, it would cost \$.007 (7/10ths of one cent) to reach each reader:

$$\frac{\$14{,}000}{2{,}000{,}000} = \$.007 \qquad (7/10\text{¢})$$

but, according to the result of the experiment, only 37 out of every 100 readers are reached, or 740,000 out of 2,000,000. Therefore, it cost 2.7 times (100 ÷ 37 = 2.7) as much as \$.007 or \$.0189 to reach each reader, and \$18.90 to reach 1000 readers.

(If, as is frequently estimated, each copy of the publication represents an average of five readers the cost of reaching 1,000 would be the cost as given in this table, divided by five. Thus, instead of \$18.92 per thousand, we should have \$3.78 per thousand.)

TABLE I.

Table showing attention value of each advertisement in the Saturday Evening Post of November 8th, 1919.

11 DOUBLE PAGE OR COVER ADVERTISEMENTS

Page	Name of Concern or Commodity.	Attention value, or weighted percentage of readers who noticed advertisement.	Cost of space in 1919.	Cost of reaching 1000 readers (based on circulation of two million and experimental data).
100-101	Columbia Grafonola colored center spread dbe page	37	$14,000	$18.92
112-113	Morris & Co. 1 page colored, 1 page B & W	48	12,000	12.48
124-125	Council Meats 1 page colored, 1 page B & W	37	12,000	16.20
104-106	Goodyear Cord Tires dbe page B & W	70	10,000	7.14
108-109	Sheldon Axle dbe page B & W	47	10,000	10.64
120-121	Hansen (Gloves) dbe page B & W	62	10,000	8.06
130-131	Burroughs Adding Machine dbe page B & W	41	10,000	12.19
138-139	Star Hack Saw Blades dbe page B & W	24	10,000	20.83
Back Cover (outside)	Velvet Tobacco	93	10,000	5.37
Front Cover	Nash Motors (automobiles)	29	7,000	12.04
Back Cover (inside)	Nut Tootsie Rolls	38	7,000	9.17

17 COLOR PAGES AT $7,000 PER PAGE

Page	Name of Concern or Commodity.	Attention value, or weighted percentage of readers who noticed advertisement.	Cost of reaching 1000 readers (based on circulation of two million and experimental data).
59	Aeolian-vocalion	64	5.46
60	Applju Phez Co.	34	10.29
65	Carnation Milk	26	13.44
66	Jordan Motor Co.	39	8.96
75	Liggetts Chocolates	67	5.22
77	Graton & Knight Belting	25	14.00
87	Pennsylvania Auto Tube	30	11.62
89	Plumb Hammers and Hatchets	39	8.96
90	Westcott Motor Co.	26	13.44
99	Fulton Motor Truck	31	11.27
102	Sun Flakes	28	12.46
114	Prince Albert Tobacco	56	6.24
123	Utiliter Midwest Engine Co.	49	7.14
135	Auto-lite	43	8.12
136	Kellogg's Krumble Bran	27	12.95
141	Globe Cord Tires	15	23.31
142	"Wearever" The Faultless Rubber Co.	39	8.96

62 FULL PAGE BLACK AND WHITE ADVERTISEMENTS AT $5,000 PER PAGE

Page	Concern or Commodity	Attention value, or weighted percentage of readers who noticed advertisement.	Cost of reaching 1000 readers (based on circulation of two million and experimental data).
1	Ingersoll Watches	87	$2.87
2	Luxite Hosiery	88	2.84
33	Campbell's Pork & Beans	51	4.90
35	Republic Solid Truck Tires	25	10.00
37	Styleplus Clothes	52	4.80
39	Cadillac Automobile	26	9.61
41	Pathe Phonograph	39	6.40
43	Liberty Motors Automobile	50	5.00
45	Essex Automobile	51	4.90
47	Printzess Dress	18	13.85
48	The General Cord Tire (Akron)	36	6.90
51	Rex Chain	26	9.61
52	The Cutler Hammer Mfg. Co.	37	6.75
55	Collegian Clothes David Adler & Sons Co.	53	4.71
56	Hamilton Watches	25	10.00
63	Billings & Spencer Co.	33	7.55
68	Geo. A. Fuller Co. Building Construction	23	10.85
71	Right Posture Boys Clothes	45	5.55
72	B. F. Sturtevant Company	15	16.65
78	Niagara Searchlights French Ray-o-lites	21	11.90
80	Oregon City Woolens	23	10.85
83	Calarab Fruit Confections	22	11.35
84	Sellers Kitchen Cabinets	19	13.15
92	Monel Metal (International Nickel Co.)	45	5.55
95	Wurlitzer Piano	37	6.75
96	Watkins Mulsified Cocoanut Oil Shampoo	33	7.55
106	Disteel Wheels (Steel Auto Wheels)	39	6.40
110	Eureka Electric Vacuum Cleaner	34	7.35
117	Packard Motor Car Co. Automobiles	39	6.40
118	Gillette Safety Razor	62	4.03
127	Garford Truck Motor	35	7.10
128	Remy Ignition Systems	29	8.60
133	Colossus Sponges	33	7.55
144	Eastman Kodak Co.	36	6.90
147	Vode Kid Shoe Leather	57	4.39
148	Delco Ignition Systems	29	8.60
151	Hammermill Bond Paper	34	6.40
152	Fox Film Co.	43	5.80
155	American Chain Co.	35	7.10
156	Hanes Underwear	49	5.10
159	Belber Traveling Goods	28	8.90
160	Lincoln Electric Co.	29	8.60
163	Simonds Saw Steel Products	38	6.55
164	Nettleton Shoes	**17**	**14.70**

Page	Commodity or Concern.	Attention value, or weighted percentage of readers who noticed advertisement.	Cost of reaching 1000 readers (based on circulation of two million and experimental data)
167	White Automobile Trucks	25	10.[illegible]
168	The Yale & Towne Mfg. Co.	47	5.30
171	Haughton Elevators	20	12.50
172	Columbia Batteries	38	6.55
175	The Gates Rubber Co.	14	17.85
176	Gilmer Fan Belts	28	8.90
179	Hassler Shock Absorbers	21	11.90
180	S. R. B. Ball Bearings	20	12.50
183	Penn Safety Razor	36	6.90
184	Louden Overhead Carrying System	15	16.65
187	Beaver Board	34	7.35
188	Cyclone Fence	15	16.65
191	Auburn Automobile Co.	32	7.80
192	Dalton Adding & Calculating Machine	39	6.40
195	Johns-Manville Automobile Equipment	26	9.60
196	Williams Shaving Cream	66	3.79
199	Signet Ink, Russia Cement Co.	27	9.25
200	Robbins & Myers Motors	16	15.60

20 HALF PAGE BLACK AND WHITE ADVERTISEMENTS AT $2,500 EACH

Page	Commodity or Concern.	Attention value, or weighted percentage of readers who noticed advertisement.	Cost of reaching 1000 readers (based on circulation of two million and experimental data).
150	Neverleek Top Material	12	$10.40
154	Fibrocotta Pails	10	12.50
157	Quaker Oats Co.	30	4.15
158	Yankee Tools	13	9.60
161	Trenton Batteries Co.	10	12.50
162	Twinplex Stropper	29	4.90
165	Lanpher Coats	20	6.25
166	Auto-Strop Razor	37	3.38
169	Ustus Limousette	17	7.35
170	Bernard Pliers	14	8.92
173	Parker Fountain Pens	49	2.55
174	Van Camp's Pork & Beans	22	3.68
177	Athena Underwear	16	7.80
178	Atwater Kent Mfg. Co.	31	4.03
181	Denby Motor Truck	9	13.87
182	Beeman's Chewing Gum	15	8.33
185	Swinehart Tires	25	5.00
186	Wizard Foot Appliances	46	2.70
189	Girard Cigars	25	5.00
198	Curtis Publishing Co.	38	3.28

14 QUARTER PAGE BLACK AND WHITE ADVERTISEMENTS AT $1,250 EACH

Page	Commodity or Concern.		Attention value, or weighted percentage of readers who noticed advertisement.	Cost of reaching 1000 readers (based on circulation of two million and experimental data).
94	Whitman's Candy		21	$2.97
94	Beacon Shoes		21	2.97
97	Tiffany & Co.		38	1.64
97	Everready Daylo		9	6.94
149	Baker-Vawter Co.		7	8.92
149	Icy-Hot Bottles		11	5.68
153	Fitall Adjustable Toilet Kit		26	2.40
153	The Koupet Top		11	5.68
193	Sterling System Homes		7	8.92
81	Ostermoor Mattress	(One Column)	14	4.46
82	S. F. Webster Co.	" "	7	8.92
85	Edgeworth Smoking Tobacco	" "	7	8.92
197	Curtis Publishing Co.		28	2.23
190	Ralston Shoes	(Slightly larger than quarter page)	7	8.92

The detailed results of this research are given in the foregoing table, and the remainder of the report will be devoted to a study of these results. The data will be grouped in various ways, so as to throw light on certain definite points. By referring to these tables, additional points other than those already discussed here, may be studied.

TABLE II.

Table II shows the average attention value of all the different kinds and sizes of advertisements (excepting the preferred positions and advertisements smaller than ¼ page) that appeared in the November 8th, 1919, issue of the Saturday Evening Post, together with the "experimental ratios" and the cost ratios. The average of the black and white pages is taken as the base, and given an arbitrary value of 100%, and the experimental ratios are the ratios of the attention values of the quarter pages, half pages, etc., to this arbitrary value.

Number of advertisements.	Space and color.	Range of attention values (highest and lowest).	Average attention value.	Experimental ratio.	1919 cost ratio as charged by Curtis.
14	Quarter Pages	7-38	15.4	47%	25%
20	Half Pages	9-49	23.4	71%	50%
60	B & W Pages	9-88	33.1	100%	100%
17	Colored Pages	15-67	37.5	113%	140%
5	Double Page B & W Spreads	24-70	48.8	147%	200%
2	Double Page Spreads 1 p. col., 1 p. B & W	37-48	42.5	128%	240%
1	Double Page Colored Spread		37.0	112%	280%

It should be emphasized that the above table deals with the attention value of the advertisements only, and not with the persuasiveness or pulling power of the advertisements or with any other factor relating to them. This table shows clearly that *the increase in size of space used or the use of color does not increase the attention value of the space in direct proportion to the cost.* A colored page, although it costs 40% more than a black and white page has only 13% greater attention value; while a double page black and white spread, which costs 100% more, has only 47% greater attention value. These questions and values are discussed further under the sections on the attention value of color and the attention value of space.

From these tables it appears that in the case where the average attention value for the 17 colored pages is compared with the average attention value for the 60 black and white pages the colored pages are only 13% more effective than the black and white pages. The colored pages in 1919 cost 40% more than the black and white pages and now (1920) cost 25% more. Furthermore, half the colored pages had individual attention values less than the average for the black and white pages; the minimum attention value within the two groups was about the same; and the maximum attention value attained by a black and white page was much greater than that of any colored page.

A further study of Table II shows that in the case of the double page spreads, the average of the attention value of black and white double page spreads was 15% greater than the average for the double page spreads where a combination of one colored and one black and white pages is used; and 30% greater than that of the one center spread where both pages are colored.

If we wish to compare the relative attention value of the advertisements in money, we may transpose the ratios given in Table II into dollars, and again take as a base the average attention value of the black and white page. Assuming that the average black and white page is worth what it costs, we may compare the relative cost and attention value of all the advertisements (both colored and black and white) with the average black and white page.

TABLE III.

Table III shows the relative attention value in dollars of colored, and black and white space, based on the results of this experiment and the Curtis Publishing Company's 1919 rate card.

Space and color.	Cost of space according to Curtis Publishing Co. 1919 rate card.	Cost ratio.	Experimental ratio.	Monetary attention value on basis that one black and white page is worth $5,000 as given by experiment.
1 page black and white	$5,000	100%	100%	$5,000
1 page colored	7,000	140%	113%	5,650
2 page black and white	10,000	200%	147%	7,350
2 page 1 col.—1 B & W	12,000	240%	128%	6,400
2 page colored	14,000	280%	112%	5,600

It will be noted from this table that in 1919, when the colored page cost 40% more than the black and white page, the attention value of the average colored page was only 13% more than the attention value of the average black and white page; therefore, the difference between the attention value and the costs of these two kinds of advertisements was 27%. Stating these percentages in dollars, we find the difference in cost between the colored page and the black and white was $2,000, while the difference in monetary attention value between the two was $650. The difference, therefore, between the cost and the attention value of the average colored page was $1,350. In other words, this experiment indicates that the *use of colors, for attracting attention, cost on the average $1,350 more than it was worth.*

There was a difference in cost of $5,000 ($12,000—$7,000) or 71% between a single colored page and a double page spread, where a combination of one colored page and one black and white page was used. The difference in attention value between these two pieces of space, according to this experiment, was $750 ($6,400—$5,650), or 13%. In other words, when the average double page spread (one page colored and one page black and white) is compared with the single colored page, the comparison shows that the use of the additional space cost $4,250 more than it was worth for attracting attention.

It should be kept in mind that these comparisons indicate only relative values for *attention.* If color or double-size are used for this purpose solely, the added cost is wholly disproportionate to the increased value. If color or double-size are used for other purposes which seem to the advertiser to be good, and sufficient to warrant the added expenditure, then the facts indicated here may not be decisive for him. Examination of the color pages indicates, however, that in many cases, color has been used simply for added attention value; in these cases the object has been attained at disproportionate cost, as compared with black and white.

With regard to the relative value of color, the reader may draw some conclusions by comparing the percentages of increase in ratios as shown by the Curtis Publishing Company's 1919 and 1920 rate cards. Such a comparison is made in Table IV, which follows:

TABLE IV.

A comparison of the Cost of Space in the Saturday Evening Post for 1919 and 1920.

(The cost of a black and white page is taken as the base, and given an arbitrary value of 100%.)

Space and color	1919 Rates	Ratios	1920 Rates	Ratios	Increase in price	Percent increase in price
Black and white page	$5,000	100%	$6,000	100%	$1,000	20%
Colored page	7,000	140%	7,500	125%	500	7%
Center Spread	14,000	280%	15,000	250%	1,000	7%
Back Cover	10,000	200%	10,000	200%	0	0%

Examination of this table leads to the conclusion that the publishers have recognized that color has been overvalued in previous rate-schedules, since the increase in the price of color pages is not proportionately as great as the increase in the price of black and white. In 1919 a colored page cost 40% more than a black and white page, while in 1920 a colored page costs 25% more than a black and white page. Even this difference in cost is nearly double the indicated difference in attention value.

PREFERRED POSITION IN THE SATURDAY EVENING POST.

The attention value of the advertisements as given in Table 1 are, of course, based on several factors, namely: (1) The attention value of the advertisement itself; (2) the attention value of the page on which the advertisement is printed, i. e., its preferred position; (3) the value of right and left hand pages; (4) in the case of advertisements smaller than full pages, the position of the advertisement on the page; (5) attention value of color; etc.

I.—BACK COVER VS. BLACK AND WHITE PAGES.

The back cover is undoubtedly a preferred position. If we compare the back cover with the average inside black and white page, which has an average attention value of 33.1, and give this figure an arbitrary value of 100%, we will find that the back cover has an attention value of 281. Comparing costs, and assigning to the average inside black and white page a value of 100%, we find that in 1919 the back cover cost 200 while now (1920) it costs 166⅔. Therefore, assuming this comparison to be fair, we may say that judged purely on the basis of attention value, the back cover was worth (1919) 81% more than it cost, and is now (1920) worth 114% more than it costs. (It may be conceded that its other values are not greater than those of inside pages—at any event, in the same ratio.)

Conclusions.

1. From a practical standpoint, as far as attention value is concerned, the back cover is worth over 2⅘ times as much as the average inside black and white page, and not quite 2½ times as much as the average inside colored page. Today, 1920, the back cover costs only 66⅔% more than a single black and white page, and only 33⅓% more than the single colored page.

2. Another investigation, conducted along similar lines with the Saturday Evening Post, brought forth the fact that the back cover was worth 2½ times as much as the average inside black and white pages; while a third investigator, who experimented with the Cosmopolitan and Everybody's magazines, claims the back cover to be worth 3 times as much as the average inside page.

The Psychology of Preferred Position and the Back Cover.

The value of preferred positions consists largely, perhaps entirely, in their greater attention value—not in better copy, or better illustration, or greater persuasive power, but simply in the greater amount of attention which they are able to command. This greater attention value is due to the following facts: first, the advertisement in a preferred position is seen by a greater number of persons, i. e., the outside cover is often seen lying on the table or across the aisle in a public conveyance; and second, the outside cover is seen by the same persons more frequently.

The high attention value of the back cover seems to be due, not so much to the fact that it is printed in two colors (for color according to the results of this experiment, only adds 13% to the attention value of the page) but primarily to its unique position. Most of the readers saw this page either first or last—and these impressions are more permanent.

Results obtained by experimental psychology tell us that, according to the laws of association, the factors primacy and recency greatly influence the recognition and recall of the material to be learned. That is, it is always easier to learn and remember, or recall and recognize, the things we see first and last. The degree of difference for memory value between these two factors, primacy and recency, as far as we know (based on the results of association experiments in learning) seems to be slightly in favor of the factor, recency. Other things being equal, we are most likely to remember best the thing we saw last, and remember next best the thing we saw first. Many other reasons for the high attention value of the back cover might be tendered. These, however, would be purely speculative and not scientific.

II.—PAGES ONE AND TWO AS PREFERRED POSITIONS.

Next to the back cover, pages one and two should be given careful consideration. The data show these pages to have better attention value than any other pages in the November 8th issue of the Post, with the exception of the back cover. By comparing the experimental results, we find that these two pages were recognized almost as frequently as the back cover. When one considers that pages one and two cost only half as much as the back cover, they seem to occupy the most economical positions in the post.* The cost of these pages was (1919) $5,000 and is now (1920) $6,000. When we compare pages one and two with the other pages in this issue of the Post, black and white, colored, double page spreads, etc., we obtain the following data:

TABLE V.

The attention value and relative cost of Pages 1 and 2, as compared with the other pages in the November 8th, 1919, issue of the Saturday Evening Post.

Space and color	Cost 1919	Average attention value	Supposed value as based on pages 1 and 2	Cost Ratio
Pages 1 and 2	$5,000 each	87.5	100%	100%
(60) Black and white pages	5,000 each	33.1	38%	100%
(17) Colored pages	7,000 each	37.5	43%	140%
(8) Double page spreads	11,000 each (Aver. price for eight)	45.8	52%	220%
(20) Half pages	2,500 each	23.4	27%	50%
(14) Quarter page	1,250 each	15.4	18%	25%

---

*It is to be noted that these pages are in such demand that there is a long waiting list.

A study of the above table shows that (1) the average inside black and white page has only one-third as much attention value as pages 1 and 2, while it costs just as much; (2) the average color page has less than half as much attention value and costs 40% more; (3) the average double page spread has about one-half as much attention value as pages 1 and 2, and costs more than twice as much; (4) the average half page has about one-quarter as much attention value and costs half as much; and (5) the average quarter page has about one-fifth as much attention value as pages one and two and costs one-quarter as much. A previous investigation, conducted by another investigator, showed pages one and two to be worth almost twice as much as the other black and white pages in the issue of the Post with which the experiment was conducted.

If the experimental data are again used as a basis for comparing the results, and the Curtis Publishing Company's 1920 advertising rates are substituted for the 1919 rates, we obtain a somewhat smaller degree of difference between the value of pages 1 and 2 and the value of the colored and double page spreads, due to the fact, as has been previously stated, that the black and white pages have increased 20% in price, while the colored pages and the center spread have increased only 7% in price. A comparison between the average attention value of pages 1 and 2, the colored pages, and the center spread, as based on the 1920 rate card, is given in the following table:

TABLE VI.

The attention value and relative cost of pages 1 and 2 compared with the colored pages and the center double page spread, as based on the present (1920) advertising rates and experimental data.

Space	Cost 1920	Average attention value	Supposed value as based on pages 1 and 2	Cost Ratio
Pages 1 and 2	$6,000 each	87.5	100%	100%
Colored pages	7,500 each	37.5	43%	125%
Center spread	15,000 each	37.0	42%	250%

The conclusions that may be drawn from this table are: (1) that the colored pages are less than half as effective as pages one and two, as far as attention value is concerned, and cost 25% more; and (2) the center spread, which costs two and a half times as much as pages one and two is less than half as effective in attention value, or a total difference of approximately 500%.

The back cover, as has been previously stated, secures at least part of its high attention value due to the factor psychologically known as "primacy," (for many readers look at the back cover before opening the Post). This factor, primacy, may also be considered one of the principal reasons why pages one and two receive such good attention value—the majority of the readers, it is believed, begin to turn the pages of a periodical from the front towards the back. If, however, the readers should begin to turn the pages over in the opposite direction, then the psychological factor, recency (seeing pages one and two almost last) will in all probability influence the memory value of the advertisements on pages one and two. As has been heretofore stated, the results obtained from association experiments show that the factor, recency, is slightly more effective in fixing an impression upon the memory of the individual than the factor, primacy.

Therefore, based on the experimental results and the known psychological laws of association, it is believed to be a safe statement that pages one and two are the most economical advertising pages, as far as attention value is concerned, that are published in the Saturday Evening Post, and that they are worth at least 33⅓% more than any other single black and white page advertisement in the Post.

The inside covers, however, did not appear to have any greater attention value than the other color pages.

III.—ATTENTION VALUE OF ADVERTISEMENTS IN DIFFERENT POSITIONS ON THE PAGE.

Right and Left Hand Pages

TABLE VII.

Table VII shows the average attention value of the advertisements on the right and left hand pages of the November 8th, 1919, issue of The Saturday Evening Post. The advertisements are grouped according to their size.

	Left-Hand Pages		Right-Hand Pages		
Total number of pages	Number	Average attention value	Number	Average attention value	Percentage of advantage
17 colored pages	7	35.6	10	38.9	Right hand, 9%
62 Black & white pages	30	33.9	32	35.8	Right hand, 6%
20 Half pages	11	24.3	9	22.2	Left hand, 8.5%
14 ¼ pages	4	14.0	10	15.8	Right hand, 1.3%

These figures show that in three out of four groups, the right-hand page has a higher degree of attention value than the left-hand page. The difference, however, does not appear to be very great. If we compare the attention value of the 58 black and white pages (eliminating pages one and two and the two pages next to the reading assignment), we find that:

> 60% (18) of the right-hand pages are above the average for the left
> and
> 40% (12) of the right-hand pages are below the average for the left
> but only
> 39% (11) of the left-hand pages are above the average for the right
> and
> 61% (17) of the left-hand pages are below the average for the right

This indicates clearly that not only are the right-hand black and white pages, taken as a whole, superior to the left-hand black and white pages, but it also indicates that the majority of the right-hand pages are, for one reason or another, superior in attention value to the left hand pages. How much of this superiority in attention value is due to position cannot be fully established without further supporting the results of this experiment by the evidence of a complementary experiment.

Conclusions

Taking into account the results of other experiments together with the results here obtained, it appears safe to state that the attention value of the average right-hand page is 5% superior to that of the average left-hand page. That is to say, if we should reverse the position of all the advertisements in the November 8th, 1919, issue of the Post, placing all the right-hand pages on the left side of the magazine and the left-hand pages on the right side of the magazine, the chances are that the average attention value of the present right-hand pages would decrease 5% and the average attention value of the present left-hand pages would increase 5%.

Half Page Advertisements

Since all the half-page advertisements in the November 8th, 1919, issue of the Post were vertical half pages, and since they were printed either on the extreme left edge of the page when they appear on left pages, or were printed on the extreme right-hand edge of the page when they appeared on the right-hand pages, the question of the relative value of the outside vs. inside position of the half page cannot be discussed, except to say that the left-hand half pages seem to be about 8% superior in attention value than the right-hand half pages. The preceding table (Table VII) shows this quite clearly.

Quarter Page Advertisements

Since all of the quarter-page advertisements in the November 8th, 1919, issue of the Post were printed on the outer edge of the page, there are only four possible positions to consider: two on the right-hand pages and two on the left-hand pages.

The only conclusion based upon the results of this experiment that it seems safe to draw is that the upper quarter pages are approximately 25% superior to the lower quarter pages in attention value. The results of a somewhat similar experiment, connected with the November 22nd, 1919, issue of the Saturday Evening Post, and the results obtained by other investigators, support this conclusion.

IV.—ATTENTION VALUE AS AFFECTED BY DISTRIBUTION THROUGHOUT THE PERIODICAL.

58 Black and White Pages as Affected by Distribution.

In considering the factor of primacy, we may take up the question as to whether the first ten advertising pages, coming directly after the solid reading matter, have a higher degree of attention value by virtue of their position, than the succeeding pages.

The following statement shows the effect of distribution on the attention value received by the 58 Black and White Page advertisements that appeared in the November 8th, 1919, issue of the Saturday Evening Post.

	Average attention value
1st group of 10 pages, from page 33 to page 51	38.6
2nd group of 10 pages, from page 52 to page 83	29.7
3rd group of 10 pages, from page 84 to page 144 (omitting pages 117 and 118 which appeared opposite the reading assignment given to the class)	34.0
4th group of 10 pages, from page 147 to page 164	35.9
5th group of 10 pages, from page 167 to page 184	26.2
6th group of 8 pages, from page 187 to page 200	31.9

The 3rd group contained two high-score advertisements (Monel Metal, 45, and Gillette Safety Razor, 62); and the 4th group contained Vode Kid Shoe Leather (57) and Hanes Underwear (49). The last (6th) group contains the Williams Shaving Soap advertisement, which secured a score of 66, the highest score of all the black and white page advertisements (pages one and two excepted) in this issue of the Post.

Allowance must be made for the possibility of some special interest in the readers' minds and the effect of some particularly attractive copy, which may affect the averages in small groups of cases. This factor, however, appears to be negligible as affecting the averages for most of the position groups, since the various kinds of articles, such as men's wear, automobiles, those consumed for women's and family use, etc., appear to be pretty evenly scattered throughout the issue. But the relatively high average for the 3rd group may be somewhat discounted on the ground that 6 of the articles included are things widely advertised for women's and family use; and the last two groups (5th and 6th) might have shown a higher average attention value if they had not contained so large a proportion of the technical articles bought chiefly for business or industrial use.

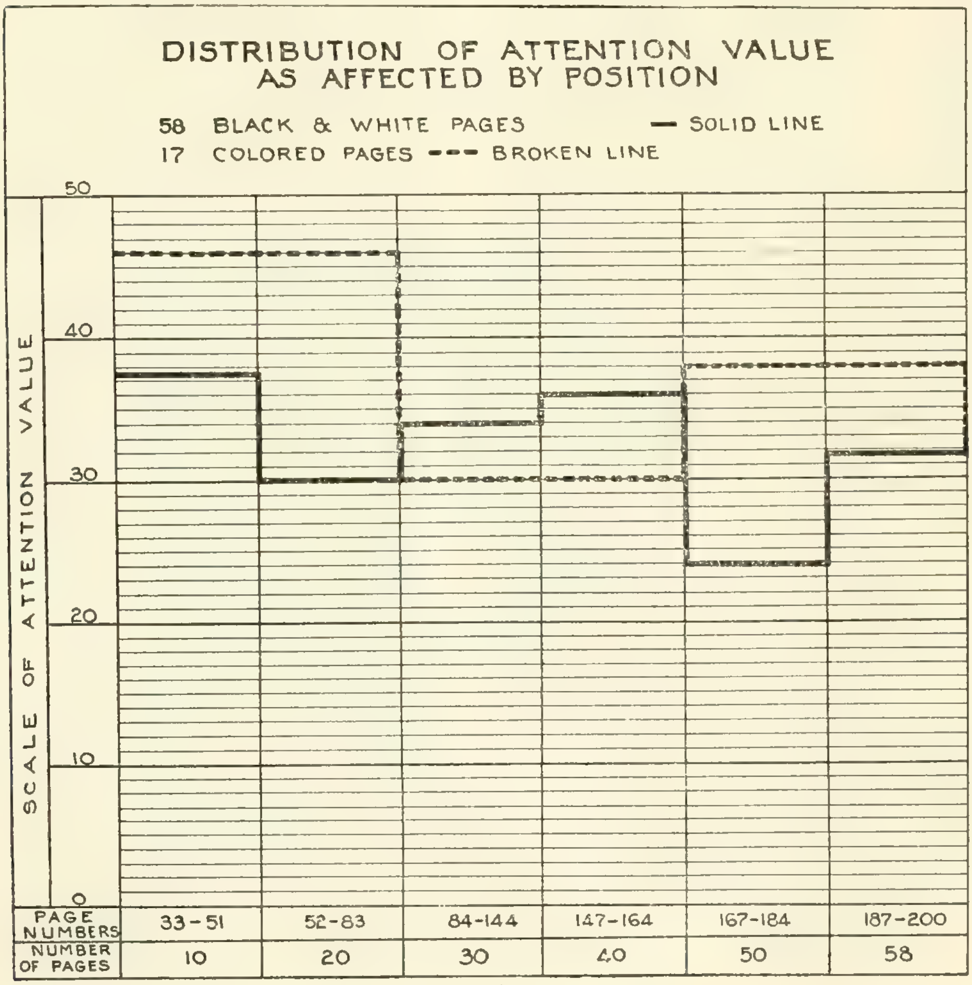
There seems to be a tendency for the attention value scores of the black and white pages to distribute themselves pretty evenly throughout the entire advertising section of the Post, although *the average attention value of the first ten pages is superior to that of any other group average.* This seems to indicate that the Curtis Publishing Company has succeeded somewhat in overcoming the difficulty with which a publisher is always confronted, namely, that of trying to secure equal attention value for all advertisers. The results of this experiment certainly cannot be interpreted to mean anything other than that the distribution of reading matter is beneficial in securing attention for the advertiser. Whether this kind of attention value is favorable or not, to the advertiser, one cannot say from the results of this experiment, but it seems that if attention value thus received is not favorable to the advertiser, at least it is not unfavorable to him, and can therefore do him no harm.

17 Colored Pages as Affected by Distribution.

When the 17 colored pages that appeared in the November 8th, 1919 issue of the Post are divided into three groups of 5, 6 and 6, respectively, we find that the following attention value averages are secured:

	Average attention value
1st group of 5 colored page advertisements	46.0
2nd group of 6 colored page advertisements	30.0
3rd group of 6 colored page advertisements	38.0

This also leads to the conclusion that the factor of primacy has something to do with the relative degree of attention value that the advertisements secure. Somewhat similar conclusions to those drawn from the distribution of the black and white page advertisements may also be applicable here.



The accompanying chart illustrates the tendencies disclosed by the foregoing figures. The distribution of attention value is fairly uniform throughout, but a clear tendency to be highest for the first group of pages, is apparent; and some evidence of a greater attention value attaching to the last pages than to the middle groups, may also be seen.

The Center Spread.

This experiment throws little or no light on the question of the position value of the center spread. As has been heretofore stated, this advertisement received less attention than six out of eight other double page spreads that appeared in the November 8th, 1919, issue of the Post. To try to diagnose the exact cause, were it possible to do so, would be beyond the scope of this paper, and, to try to do so without further scientific data would merely be expressing a speculative opinion, which opinion would be open to all the criticisms that such opinions usually deserve.

One point that an examination of this (November 8th) issue of the Post will reveal is that the other seven double page spreads follow the center spread. Another point is that 24 black and white pages and 10 colored pages precede the center spread. To render an opinion as to what influence these factors have, would also be purely speculative, and until they have been more thoroughly tested would avail nothing.

Still other points to be considered along this line of inquiry are: what influence. if any, has (1) the fact that the first 13 black and white pages precede all of the colored pages; (2) the fact that 24 black and white pages and 10 colored pages precede the first double page spread; (3) the fact that all the half page advertisements are printed after all the colored pages and all the double page spreads. Is it possible that the last named fact increases the attention value of the half page advertisements? Or is the increase not chiefly due to the juxtaposition of the half pages with the reading matter? These are a few of the questions that can only be answered by future studies, if they can be answered at all. They are merely stated here as suggestive of the numerous mechanical factors encountered and the difficulties that it is necessary to overcome, before more scientific light can be thrown on the question of the influence of position on the attention value of the inside pages of such publications as the Saturday Eveing Post.

General Conclusions.

Taking the sum total of all the above data, three statements may safely be made:

First: That primacy is an influential factor in securing better attention value for a group of advertisements.

Second: Just how influential the factor, primacy, is in securing the attention value for a group of advertisements, cannot be safely concluded at this time. It is believed, however, that a conservative estimate, based on the results of this experiment would be that the chances are that an advertisement will receive 15% more attention if it is placed among the first group of advertisements than if placed in the middle group, i. e., the second group where the advertisements can be distributed into three or more groups.

Third: That the influence of the factor of primacy may be overcome to a large extent by the distribution of interesting reading matter throughout the advertising section.

V.—THE ATTENTION VALUE OF LARGE AND SMALL SPACE.

An important question is, does increase in size give relative increase in efficiency as far as attention value is concerned?

The next table (Table VIII) gives the following data:

1. The size of the advertisements (All the cover pages; all the colored pages; the preferred positions, pages 1 and 2; and all advertisements under ¼ page, are not considered).

2. The number of advertisements grouped in each size.

3. The average percentage of readers who saw the advertisements in each of these groups.

4. The supposed value, i. e., the actual size of the various advertisements in the different groups, expressed in percentage of the size of the full page black and white advertisements.

5. The value of these advertisements as determined by the experiment, each value being expressed in percentage of a whole page.

6. The theoretical value of such a sized advertisement, based on the law that attention value of space varies according to the square root of the area.

TABLE VIII.

Number of advertisements	Size of advertisement. considered.	Average percent of readers who noticed the advertisement.	Supposed value, i. e., percentage of size of 1 page advertisement.	Value obtained in this experiment, expressed in terms of a one page advertisement.	Theoretical value (Square root law).
5	2 page	48.8	200%	147%	141%
60	1 page	33.1	100%	100%	100%
20	½ page	23.4	50%	71%	71%
14	¼ page	15.4	25%	47%	50%

Casual inspection of the figures of this table indicates clearly that the value of these different sized advertisements, as obtained in the experiment (see columns 3 and 5), agree very closely with the theoretical values (column 6) and that they do not agree at all with the values of the space when it is directly estimated in terms of the size of the advertisement (column 4). For example, a quarter-page advertisement occupies 25% of the area of a full page, and the Curtis Publishing Company charge 25% of what they do for a full page. But, according to theory it should be worth half as much as a full page. This experiment indicates an attention value equal to 47% of that of a whole page. There have been at least a dozen other similar experiments made, in addition to several actual business tests, all of which verify these facts. Therefore, one may conclude that the attention value of space does not increase in proportion to the amount of space used, but approximately according to the square root of that amount. In other words, other things being equal, four times the amount of space is needed to secure twice the attention value. It is noteworthy that the experimental value of the full page is 100% and the quarter page is 47%, or almost exactly in accord with the square root law.

The data in Table VIII are stated again in Table IX but instead of expressing the values in terms of percentage, they are expressed in terms of dollars. Column 2 gives the cost of space as charged by the Curtis Publishing Company (1919), column 3 gives the value of the space as based on this experiment, on the assumption that a full page is worth what it costs ($5,000); and column 4 gives the corresponding figures but here based on theory.

TABLE IX.

Attention value of different sized advertisements stated in dollars. upon the assumption that a full page advertisement is worth $5,000.

Size of advertisements.	Cost of space. Amount charged by Curtis Publishing Co. (1919).	Attention value on basis that a 1 page advertisement is worth $5,000 (as given by the experiment).	Attention value on basis that a 1 page advertisement is worth $5,000 (as given by theory).
2 page	$10,000	$7,350	$7,050
1 page	5,000	5,000	5,000
½ page	2,500	3,550	3,550
¼ page	1,250	2,350	2,550

The correspondence between columns 3 and 4 is very close—just about what might be expected from such an experiment. In other words, this experiment, as has been previously said, supports the theory that one does not get corresponding increases in attention value with increase in size of the advertisement. Attention value increases as the square root of the area and not directly.

VI.—DRAWINGS VS. PHOTOGRAPHS.

Of the 62 black and white page advertisements, 57 contained illustrations, of which 33 were drawings and 12 were photographs. The relative attention value of these two groups is of importance as throwing light on the moot point concerning the advantage of drawings. This experiment shows that the drawings ranged from 15 to 53, with an average of 34.9; while the photographs ranged from 19 to 51, with an average of 33.9. It may be concluded that in this case, the two groups of illustrations were about equally effective in attracting attention.

VII.—THE ATTENTION VALUE OF COMMODITIES ACCORDING TO USE OR READER INTEREST.

TABLE X.

Table X shows the attention value of different groups of advertising, arranged by subjects: *"Men's"* includes articles of interest to all men and bought by them for personal use. *"Women's and Family"* includes articles consumed by the whole family, but bought usually by women, and also a few articles for women's exclusive use. *"Automobiles"* and *"Auto Accessories"* are self-explanatory. *"Technical"* includes articles bought chiefly for business or industrial use, with a few articles of home use of technical nature. These (marked #) might have been grouped in *"Women's and Family."* This table is based upon 60 full page black and white advertisements (preferred positions—pages 1 and 2 omitted).

Men's	
Styleplus	52
Collegian	53
Hamilton	25
Gillette	62
Hanes	49
Nettleton	17
Penn (razor)	36
Williams	66
	—
Average	45
Range	17-66

Auto Accessories	
Republic tires	25
General cord	36
Cutler Hammer	37
Disteel wheels	39
Remy	29
Delco	29
American chain	35
Hassler	21
Gilmer	28
S R B (ball bearings)	20
Johns Manville	26
	——
Average	29.5
Range	20-39

Automobiles	
Cadillac	26
Liberty	50
Essex	51
Packard	39
Garford	35
White	23
Auburn	32
	——
Average	36.4
Range	23-51

Women's and Family	
Campbells	51
Pathe	39
Right Posture	45
Niagara Searchlight	21
Oregon City	22
Calarab	22
Sellers	19
Wurlitzer	37
Watkins	33
Eureka	34
Colossus	33
Eastman	36
Belber	28
Printzess	18
Vode Leather	57
	—
Average	33
Range	18-57

Technical	
Rex Chains	26
Billings & Spencer	33
Geo. A. Fuller	23
B. F. Sturtevant	15
Monel metal	45
Hammermill	34
Lincoln	29
Simonds	38
#Yale & Towne	47
#Robbins & Myers	16
Haughton	20
Columbia Batteries	38
Gates	14
Louden	15
#Beaver Board	34
Cyclone fence	15
Dalton	39
Signet ink	27
	——
Average	28.2
Range	14-47

This analysis seems to lead to the conclusion that advertisements of articles of close personal interest to the reader—especially such as he is in the habit of purchasing—have higher average attention value than advertisements of articles which are only remotely related to his present needs and interests. Attention value has a relationship to interest, though the above group averages do not vary widely.

182585

Psych.
H8323

Author Hotchkiss, George Burton and Franken, Richard B.

Title The attention value of advertisements.

University of Toronto
Library

DO NOT
REMOVE
THE
CARD
FROM
THIS
POCKET

Acme Library Card Pocket
Under Pat. "Ref. Index File"
Made by LIBRARY BUREAU